

***Remarks***

Reconsideration of this Application is respectfully requested.

Claims 1-49 are pending in the application, with 1, 11, 22, 35, 40, and 45 being the independent claims. Claims 35-49 are new. These changes are believed to introduce no new matter, and their entry is respectfully requested. Claims 1, 7-15, 21, 22 and 28-34 were rejected, and claims 2-6, 16-20, and 23-27 were objected to.

Based on the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

***Allowable Subject Matter***

Applicants acknowledge with appreciation the Examiner's indication that claims 2-6, 16-20, and 23-27 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Accordingly, Applicants have added new claims 35-49 with 35, 40 and 45 being independent claims that correspond to claims 2, 16, and 23. Claims 36-39, 41-44, and 46-49 depend from independent claims 35, 40 and 45 respectively, and correspond to claims 3-6, 17-20, and 24-27. Thus, Applicants respectfully submit that claims 35-49 are allowable, and respectfully request that the Examiner provide an indication of their allowance in a subsequent communication.

***Rejections under 35 U.S.C. § 102***

**Claims 1, 11-13, 15, 22, 29-31**

On page two of the Office Action, the Examiner rejected claims 1, 11-13, 15, 22, 29-31 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,111,978 to Bolle *et al.*

(hereinafter Bolle). Applicants respectfully traverse the rejection, and request that it be withdrawn.

Technical differences exist between the present invention and Bolle. In rejecting the claims, the Examiner asserted that *Twbar* in Bolle is similar to the *hysteresis band* recited in claim 1. The examiner stated, "the *Twbar* is interpreted as being analogous to the *hysteresis band*." See page 2 and 3 of the Office Action. However, a close reading of Bolle shows that a *Twbar* is simply the width of a rectangular box joining two areas of interest of a fingerprint pattern, such as two minutiae. Column 7, lines 21-24 of Bolle states:

... a line or roughly a rectangular bar joining the two points. The bar is of pre-specified width of an odd number of pixels, e.g.,  $Twbar = 2W + 1$  pixels, and is roughly bilaterally symmetric with respect to the line joining the points P1 and P2. In a preferred embodiment, *Twbar* is in the range of 3 to 5 pixels.

In other words, *Twbar* is the pre-determined width of a rectangular box, with the width being orthogonal to a line joining the two points of interest. For examples see Figure 7B of Bolle, which shows a rectangular bar having a *Twbar* width of 5 pixels.

Thus, *Twbar* is a width of a rectangular box between two points of interest, not a hysteresis band as recited in claim 1. Thus, claim 1 is patentable over Bolle for at least this reason. Furthermore, nowhere does Bolle teach or suggest counting a number of crossings of the determined hysteresis band while traversing a pixel path, as recited in claim 1. Bolle does not teach or suggest counting crossings of *Twbar*, which the Examiner asserts to be similar to the hysteresis band as recited in claim 1.

Accordingly, Applicants respectfully submit that independent claim 1 is patentable over Bolle. Furthermore, independent claims 11 and 22 are also patentable over Bolle for at least these reasons, and further in view of their own features. Claims 13, 15, and 29-31, which depend therefrom, are also patentable for at least these reasons, and further view of

their own features. Applicants therefore request that the Examiner reconsider and withdraw the rejection of these claims.

***Rejections under 35 U.S.C. § 103***

**Claims 7, 21, and 28**

On page 4 of the Office Action, claims 7, 21, and 28 were rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Bolle and PCT Publication No. WO 87/06378 to Wheatley *et al.* (hereinafter Wheatley). Applicants respectfully traverse this rejection.

Applicants submit that Wheatley does not supply the teachings missing from Bolle with respect to independent claims 1, 11, and 22. Therefore, claims 7, 21, and 28 which depend from claims 1, 11, and 22 respectively are patentable over Bolle and Wheatley, alone or in combination, for at least the reasons above, and further view of their own features. Applicants therefore request that the Examiner reconsider and withdraw the rejection of claims 7, 21, and 28.

**Claims 8-10**

On page 5 of the Office Action, claims 8-10 were rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Bolle and U.S. Patent No. 6,212,290 to Gagne (hereinafter Gagne). Applicants respectfully traverse this rejection.

Applicants respectfully submit that Gagne does not supply the teachings missing from Bolle, with respect to independent claim 1. Therefore, claims 8-10 which depend from claim 1 are patentable over Gagne and Bolle, alone or in combination, for at least the reasons above, and further view of their own features. Applicants therefore request that the Examiner reconsider and withdraw the rejection of claims 8-10.

**Claims 14, 32-34**

On page 6 of the Office Action, claims 14, and 32-34 were rejected under 35 U.S.C. 103(a) as being unpatentable over Bolle. Applicants respectfully traverse this rejection.

In light of the comments regarding independent claims 11 and 22 above, Applicants respectfully submit that claims 14, 32-34 are patentable over Bolle at least for these reasons, and further view of their own features, because they are dependent claims of claims 11 and 22 respectively. Applicants therefore request that the Examiner reconsider and withdraw the rejection of claims 14, and 32-34.

***Conclusion***

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

Sterne, Kessler, Goldstein & Fox p.l.l.c.



Jeffrey S. Weaver  
Attorney for Applicants  
Registration No. 45,608

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1100 New York Avenue, N.W.  
Washington, D.C. 20005-3934  
(202) 371-2600